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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,951	10/21/2003	Namik Hrle	DE920020034US1 0920.0058C	3320
27896	7590	05/18/2006	EXAMINER	
EDELL, SHAPIRO & FINNAN, LLC 1901 RESEARCH BOULEVARD SUITE 400 ROCKVILLE, MD 20850			NGUYEN, CAM LINH T	
			ART UNIT	PAPER NUMBER
			2161	

DATE MAILED: 05/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/688,951

Applicant(s)

HRLE, NAMIK

Examiner

CamLinh Nguyen

Art Unit

2161

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/21/03</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

This Office Action is response to Application filed on 10/21/2003.

Claims 1 – 30 are currently pending in the application.

### ***Information Disclosure Statement***

1. The information disclosure statement filed 10/21/2003 is in compliance with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609. It has been placed in the application file and the information referred to therein has been considered as to the merits.

### ***Priority***

2. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in European Patent Office on 11/08/2002. It is noted, however, that applicant has not filed a certified copy of the 02102550.7 application as required by 35 U.S.C. 119(b).

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 – 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Shibamiya et al (U.S. 4,956,774).

♦ As per claims 1, 11, 21,

Art Unit: 2161

Shibamiya discloses a method/apparatus having a computer readable medium (Fig. 1) of processing a query in a database management system, the method comprising:

(a) “An optimizer module” (Fig. 1, element 34) for “Generating a preferred access path for a query at execution time based upon a first value for each variable in the query” corresponds to the method that allows the system 10 to create the access path and stored it in the application plan 32 (See col. 4, lines 57 – 63). Shibamiya discloses that several access paths can be generated for a query (4, lines 57 – 63). The query includes the key value for the generated access path (col. 2, lines 34 – 41). Therefore, the first value (first generated access path) corresponds to the “first value” for each variable in the query. “Variable in the query” see col. 34, lines 24 – 31.

(b) “ A storage module” (Fig. 1, element 32) for “Storing information related to said query, said first value for each variable and said preferred access path” Because all the paths that related to the query are stored in the application plan 32 (see col. 4, lines 57 – 63), therefore, Shibamiya patent is able to store “information related to said query, said first value for each variable and said preferred access path”.

(c) “ A functional module” (Fig. 1, element 24, 26) for “ Determining whether to regenerate said preferred access path for use with subsequent execution of the same query using a second value for each variable based upon a comparison of the stored information related to said first value for each variable with information related to said second value for each variable” As noted above, there are several access paths for the same query, and all information is stored in the system for selecting a best access path (col. 6, lines 8 – 15). The Shibamiya patent must be able to determine “whether to regenerate said preferred access path for use with subsequent execution of

Art Unit: 2161

the same query using a second value for each variable based upon a comparison of the stored information related to said first value for each variable with information related to said second value for each variable”, wherein the second value corresponds to the second value of the query or the second value in the second access path.

(d) “Regenerating said preferred access path in accordance with said determination” See col. 2, lines 34 – 41.

♦ As per claims 2, 12, 22, Shibamiya discloses:

- “Wherein step (a) further includes: (a.1) generating a preferred access path for said query based further upon a frequency distribution of said first value for each variable in said query” See col. 2, lines 34 – 41, col. 29, lines 8 – 13.

♦ As per claims 3, 13, 23, Shibamiya discloses:

- “Wherein step (b) further includes: (b.1) generating a unique identifier unambiguously denoting the query” See col. 1, lines 54 – 63, wherein Shibamiya discloses an index that includes the key value and an identifier, and Shibamiya system is able to select an access path having at least one index (col. 3, lines 58 – 65).

♦ As per claims 4, 14, 24, Shibamiya discloses:

- “Wherein step (b) further includes: (b.1) storing said first value for each variable independently” As noted above, there are several access paths for the same query, and all information is stored in the system for selecting a best access path (col. 6, lines 8 – 15). Therefore, the first value for each variable is stored independently (also see Example 1 in col. 5, lines 109 – 110, wherein the first keys are stored for each column in the index).

♦ As per claims 5, 15, 25, Shibamiya discloses:

Art Unit: 2161

- “Wherein step (b) further includes: (b.1) determining a frequency distribution of said first value for each variable” col. 5, lines 15 – col. 6, lines 15, col. 34, lines 24 – 31.

♦ As per claims 6, 16, 26, Shibamiya discloses:

- “Wherein step (b) further includes: (b.1) determining a unique indicator unambiguously denoting a category of values that cause the generation of the same access path” since there are common value and distinct values in Shibamiya patent (col.25, lines 36 – 50), therefore, there are at least two type of categories of values that cause the generation of the same access path.

♦ As per claims 7, 17, 27, Shibamiya discloses:

- “Wherein step (b.1) further includes: (b.1.1) choosing a category, wherein said category is at least one of: a category of values causing a table-space scan access path, a category of values causing an index-scan access path, a category of values causing an index-access access path, and a category corresponding to a cardinality range of said first value” See col. 18, lines 36 – 44, wherein Shibamiya discloses the optimizer can choose between a sequential table scan or index scan.

♦ As per claims 8 - 9, 18 – 19, 28 – 29, Shibamiya discloses:

- “Wherein step (c) includes: (c.1) categorizing said second value for each variable” corresponds to the value that has a distinct value and the first value belong to the common value as disclosed in claim 6.
- “Wherein step (c) includes: (c.2) determining whether said first value and said second value belong to a different category” since both values are categorized in different

Art Unit: 2161

categories (common and distinct), therefore, first value and said second value belong to a different category.

♦ As per claims 10, 20, 30, Shibamiya discloses:

- “Wherein step (d) includes: (d.1) storing the regenerated preferred access path and corresponding second values for each variable and frequency distribution” As discussed above the system is able to store different access path and corresponds value (see col. 4, lines 57 – 63) in the database, and calculate the frequency distribution (col. 29, lines 40 – 45).

### *Conclusion*

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Haderle et al (U.S. 6,219,660 B1) discloses an Access path selection for SQL with variables in a RDBMS.
- Lu et al (U.S. 5,948,108) discloses a method and system for providing fault tolerant access between clients and server.
- Anthony Klug, "Access Paths in the "Abe" Statistical Query Facility", 1982, ACM, pages 161 - 173.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CamLinh Nguyen whose telephone number is (571) 272 - 4024.

The examiner can normally be reached on Monday-Friday.

Art Unit: 2161

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on (571) 272 - 4146. The fax phone number for the organization where this application or proceeding is assigned is 571 - 273 - 8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nguyen, Cam-Linh

Art Unit 2161

LN

A handwritten signature in black ink, appearing to read "Nguyen Cam-Linh", written over a horizontal line.